

**What is claimed is:**

1. A subcutaneous port catheter system, comprising:  
a reservoir defining a chamber therein;  
a guide catheter attached to said reservoir, said guide catheter having a  
5 guide lumen and a distal guide orifice; and  
an inner catheter attached to said reservoir, said inner catheter being  
positioned within said guide lumen and extending through said distal guide orifice.
  
2. The subcutaneous port catheter system of claim 1, wherein said  
10 reservoir includes a septum configured to be traversed by a needle.
  
3. The subcutaneous port catheter system of claim 1, wherein said guide  
catheter includes a valve positioned adjacent to said distal guide orifice.
  
- 15 4. The subcutaneous port catheter system of claim 1, wherein:  
said reservoir includes an attachment cannula which is in fluid  
communication with said chamber,  
said attachment cannula includes an increased diameter portion and a  
reduced diameter portion,  
20 said guide catheter is attached to said increased diameter portion, and  
said inner catheter is attached to said reduced diameter portion.

5. The subcutaneous port catheter system of claim 4, wherein:  
each of said increased diameter portion and said reduced diameter portion  
possesses a ribbed outer surface,  
said guide catheter is removably attached to said ribbed outer surface of  
5 said increased diameter portion in a friction fit manner, and  
said inner catheter is removably attached to said ribbed outer surface of  
said reduced diameter portion in a friction fit manner.

6. The subcutaneous port catheter system of claim 1, wherein:  
10 said reservoir is fluid communication with said inner catheter

7. A subcutaneous port catheter system, comprising:  
a reservoir having a septum and defining a chamber;  
an inner catheter which is in fluid communication with said chamber; and  
15 a guide catheter having a guide lumen, said inner catheter being at least  
partially positioned within said guide lumen.

8. The subcutaneous port catheter system of claim 7, wherein:  
said guide catheter has a distal guide orifice, and  
20 said inner catheter extends through said distal guide orifice.

9. The subcutaneous port catheter system of claim 8,  
said inner catheter has a distal opening, and  
said distal opening is positioned outside of said guide catheter.

10. The subcutaneous port catheter system of claim 7, wherein said guide  
catheter includes a valve positioned adjacent to said distal guide orifice.

11. The subcutaneous port catheter system of claim 7, wherein:  
said reservoir includes an attachment cannula which is in fluid  
communication with said chamber,  
said attachment cannula includes an increased diameter portion and a  
5 reduced diameter portion,  
said guide catheter is attached to said increased diameter portion, and  
said inner catheter is attached to said reduced diameter portion.

12. The subcutaneous port catheter system of claim 11, wherein:  
10 each of said increased diameter portion and said reduced diameter portion  
possesses a ribbed outer surface,  
said guide catheter is removably attached to said ribbed outer surface of  
said increased diameter portion in a friction fit manner, and  
said inner catheter is removably attached to said ribbed outer surface of  
15 said reduced diameter portion in a friction fit manner.

13. The subcutaneous port catheter system of claim 7, wherein said guide  
catheter is attached to said reservoir.

14. A method of advancing fluid into a blood vessel of a body of a patient with a port catheter system which includes (i) a reservoir, (ii) a guide catheter, and (iii) an inner catheter positioned at least partially within said guide catheter, comprising the steps of:

5       implanting said port catheter system beneath the skin of said body so that said guide catheter and said inner catheter are at least partially positioned within said blood vessel;

          positioning a distal end portion of a needle within said reservoir after said implanting step; and

10       advancing fluid into said blood vessel through said port catheter system.

15       15. The method of claim 14, wherein:

          said inner catheter has a distal opening, and

          said positioning step includes the step of positioning said distal opening of said inner catheter outside of said guide catheter.

20       16. The method of claim 15, wherein said advancing step includes the step of advancing fluid into said blood vessel through said port catheter system while said distal opening of said inner catheter is positioned outside of said guide catheter.

17. A method of advancing fluid into a blood vessel of a body of a patient, comprising the steps of:

implanting a port catheter system beneath the skin of said body so that a guide catheter and an original inner catheter of said port catheter system are both  
5 at least partially positioned within said blood vessel, said original inner catheter being located at least partially within said guide catheter;

advancing a needle through a septum of a reservoir of said port catheter system after said implanting step so as to position a distal end of said needle within a chamber of said reservoir; and

10 infusing fluid into or withdrawing fluid from said blood vessel through said needle, said reservoir, and said original inner catheter after said advancing step.

18. The method of claim 17, further comprising the steps of:

removing said original inner catheter from said guide lumen after said  
15 infusing step;

positioning a replacement inner catheter at least partially within said guide catheter after said removing step; and

infusing fluid into or withdrawing fluid from said blood vessel through said needle, said reservoir, and said replacement inner catheter after said replacement  
20 inner catheter positioning step.

19. The method of claim 17, wherein said implanting step further includes the step of implanting said reservoir beneath said skin.

20. The method of claim 17, wherein said infusing or withdrawing step includes the step of infusing fluid into or withdrawing fluid from said blood vessel through said needle, said reservoir, and said original inner catheter while a distal opening of said original inner catheter is positioned outside of said guide catheter.